

December 14, 2009

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
Northern States Power Co.)	Docket Nos. 50-282-LR
)	50-306-LR
(Prairie Island Nuclear Generating Plant,)	
Units 1 and 2))	ASLBP No. 08-871-01-LR
)	

**PRAIRIE ISLAND INDIAN COMMUNITY’S MOTION FOR
LEAVE TO FILE NEW CONTENTIONS ON NRC’S DRAFT
SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT**

I. INTRODUCTION

The Prairie Island Indian Community in the State of Minnesota (“Community,” “Tribe,” or “Petitioner”), by and through attorney Philip R. Mahowald, the Community’s General Counsel, hereby moves the Atomic Safety and Licensing Board (“ASLB”) for leave to file new contentions based on the U.S. Nuclear Regulatory Commission’s (“NRC” or “Commission”) draft Supplemental Environmental Impact Statement (“SEIS”)¹ on the Nuclear Management Company LLC’s (“Applicant” or “NSP”) application for renewal of its license to operate Units 1 and 2 of the Prairie Island Nuclear Generating Plant (“PINGP”). The Community timely files this petition in accordance with the Licensing Board Order of November 4, 2009.²

¹ Generic Environmental Impact Statement for License renewal of Nuclear Plants, Supplement 39 Regarding Prairie Island Nuclear Generating Plant, Units 1 and 2, Draft Report for Comment, U.S. Nuclear Regulatory Commission, NUREG-1437, Supplement 39 (October 2009).

² Licensing Board Order (Conference Call Summary and Scheduling Order) (Nov. 4, 2009) at 3 (unpublished). While the Community does not believe a motion and/or consultation are required by the Board’s Order, counsel for the Community did consult with Counsel for NSP and NRC Staff prior to filing this submission.

The Prairie Island Indian Community is a Federally-recognized Indian Tribe organized under The Indian Reorganization Act, 25 U.S.C. Section 476. The Prairie Island Indian Reservation is located approximately 30 miles southeast of the Twin Cities of Minneapolis - St. Paul and near the cities of Red Wing and Hastings, Minnesota. It is located on Prairie Island at the confluence of the Vermillion and Mississippi rivers. PINGP 1 and 2 are located immediately adjacent to the Community.

Unci Maka, which translates as “Grandmother Earth,” is the Dakota term for earth that also expresses the kinship relationship between the Dakota and the earth. Likewise, the expression often used to end Dakota prayers and ceremonies, *Mitakuye Owasin*, translates as “we are all related.” *Mitakuye Owasin* encapsulates a way of life and a cultural identity based on the interconnection and unity of all forms of life. This philosophy and way of life help explain how the identity of the Mdewakanton is inextricably linked to Prairie Island. The air, soil, rainwater, groundwater, rivers, lakes, sloughs, trees, prairies, plants, and all forms of wildlife on Prairie Island are the natural and cultural resources of the Mdewakanton – resources that have been used for countless generations for subsistence, medicine, religious ceremonies, recreation, and all aspects of daily living.³ Unfortunately, the Tribe’s cultural identity and traditional way of life have been and continue to be adversely affected by the PINGP. Many Community members, especially the children, have expressed their fears about nuclear reactor safety, radioactive emissions, spent nuclear fuel, and high voltage power lines. Our members worry about whether it is safe to breathe the air, drink the water, swim and fish in the rivers and lakes, or eat the plants and animals traditionally harvested and hunted for medicine and food. It is not an overstatement to say that the concerns and fears about using our natural and cultural resources threaten the

³ In recent years, the tree used in the sacred Sun Dance ceremony – which is a vivid and real expression of the connection between the Mdewakanton and all forms of life on Prairie Island – has been harvested from PINGP grounds.

Tribe's way of life. The long-term damage to the natural and cultural resources of Prairie Island is a very real and significant concern for the Community.

The Community also owns and operates Treasure Island Resort and Casino, which employs approximately 1,500 people. The Resort and Casino includes a 480-room hotel, 24-lane bowling alley, and entertainment center. The Resort and Casino offers gaming, dining, live entertainment, a 95-space RV park, and a 137-slip marina to accommodate visitors arriving by the Mississippi River. The marina attracts many thousands of visitors during the summer months.

For the Community, the PINGP represents a 51-year legacy of broken promises and promoting the plant at the expense of our Tribe. "Huge Steam Power Plant to Be Constructed By Northern States on Prairie Island Site," declared the front page headline of the Daily Republican Eagle fifty-one years ago on November 19, 1958. "The future Prairie Island Steam Plant will look something like this Black Dog NSP plant," reads the caption below the NSP-circulated photograph of what NSP said was "a plant similar to that which is contemplated for development at this site." Announced a full decade before actual construction began so that NSP could obtain the necessary approvals and permits, the coal and natural gas steam plant promoted by NSP was later switched to a two-reactor nuclear plant.

Not surprisingly, the 1958 article describing the benefits of the proposed plant also fails to mention the Tribe, even though the plant was sited on the ancestral lands of the Mdewakanton Dakota immediately adjacent to the Tribe's reservation. Innocent omissions or deliberate disregard of the Tribe's sovereignty and Treaty rights? While it is entirely accurate to say that for most of the plants operating life the Tribe received little, if any, benefit from the plant, the

Tribe has borne a disproportionate share of the risks and costs associated with the plants continued operation, including:

- *The destruction and desecration of sacred burial mounds and other culturally and historically significant sites.* The archaeologist tasked with the “salvage” operation to remove any historically significant artifacts on the plant site used a trench digger and a bull dozer. Burial mounds in the path of construction were knowingly bull dozed or buried with fill. NSP’s archaeologist also raided two sacred burial mound sites *well outside of the construction area*, removing the human remains and funerary objects of the Tribe’s ancestors, and then abandoning the still-exposed site, leaving an open wound that remains to this day.
- *An unfulfilled promise of jobs and opportunities for our Community members.* Although constructed at a time when the Tribe was devastated by poverty and unemployment, few of the promised jobs were offered to the Tribe’s members.
- *No infrastructure improvements.* Although constructed at a time when many of the homes on the reservation lacked electricity or running water, and all of the roads unpaved, NSP ran the highest capacity power lines out to the Tribe’s reservation boundary, taking a sharp turn away from and off the reservation across the road from our homes. Instead of providing Tribal members with reliable, affordable power, NSP instead provided a softball diamond and erected a playground *underneath the 345 kilovolt power lines!* Tribal members still talk about the shocks they would get when they played on the playground. To this day our community is literally at the end of the line, receiving electricity primarily generated from coal-based power plants in North Dakota.
- *Radiological pollution in the air, surface water and groundwater.* The plant is allowed to discharge radiation into the air and surface waters. Both planned and unplanned discharges result in the release of radioactive effluent into the air, surface water and groundwater in and around the plant. Sturgeon Lake and the groundwater below Prairie Island are contaminated with tritium, which the plant continues to discharge at an ever-increasing rate. NSP has yet to provide an explanation for the ongoing tritium contamination and the significant fluctuation in tritium levels detected at the plant.
- *Thermal pollution raising water temperatures and causing heat shocks in the Mississippi River and Sturgeon Lake.* The plant is permitted to discharge thermal effluent into a pool *above* Lock and Dam No. 3, while its compliance with its thermal discharge permit is measured *below* Lock and Dam No. 3. In addition to sudden thermal shock that can be fatal to wildlife, the higher water temperatures can also contribute to an oxygen-deprived biological dead zone. Records show that on numerous occasions over the years NSP’s cooling radioactive water discharge has exceeded the temperature increase limits of its discharge permit as well as reversing and shocking the vital biorhythms of the natural endemic ecosystem (see chart).
- *Adverse Environmental, Health and Safety Risks.* For the past 40 years, one of the greatest threats to Prairie Island residents and workers as well as our Community’s

health-safety, well-being and way of life has been NSP's nuclear power plant and the tons of toxic nuclear waste that sit just 600 yards away from our homes, children's playground, clinic, businesses, cultural and customary gathering places, church and community center. Two radiological leaks have occurred during the plant's history, and its continuing radioactive and thermal emissions, ongoing tritium leaks, additional nuclear waste, and high-voltage power lines represent some of the most serious environmental, health, genetic damage, and safety risks that disproportionately impact the present and future generations of our Community. Recent international studies raising serious questions about the health impact for people, especially children, living in the immediate vicinity of nuclear power plants and high-voltage power lines, further heighten our concerns. Nevertheless, NSP steadfastly refuses to agree to further long-term radiation exposure and health studies, and has opposed efforts to implement the best available health physics monitoring technology. While according to NSP it will invest \$750 million for improvements at the plant and in its system,⁴ and the plant will generate hundreds of millions of dollars in revenues, profits and taxes for the city, county and school district, not a single penny is pledged for upgrading and improving the environmental and radiation health monitoring technology in and around the plant.

- *High Level Nuclear Waste Storage on Prairie Island.* Originally promoted as “temporary” on site storage, the plant currently stores 25 casks of spent nuclear fuel. While Congress has already voted to cut funding and the Department of Energy plans to stop licensing activities for the Yucca Mountain high-level nuclear waste repository in December, NSP nevertheless maintains that the spent fuel will only be stored at the plant for between 15 and 30 additional years. This is pure fiction. The only reasonable assumption is that the nuclear waste will be stranded on Prairie Island and under the constant threat of Mississippi River floods forever. NSP's proposal will result in 98 casks indefinitely stored roughly 600 yards away from our members' homes and the Mississippi River. The expanded nuclear waste storage will increase the cumulative radiation “skyshine” exposure beyond acceptable state lifetime cancer limits.
- *Inadequate environmental monitoring data and technology.* Existing environmental monitoring of Prairie Island provided by NSP is grossly inadequate to protect public health-safety and the environment. Experts have recommended state of the art early warning system and continuous remote monitoring of plant emissions to air, discharges to water and direct low-dose radiation exposure with enough locations to establish accurate baselines and identify where from and to the releases are coming and going. Despite the fact that other states and nuclear facilities have implemented similar real-time, computer network-linked monitoring and warning system that uses the best, most sensitive monitoring equipment available today,⁵ NSP refuses to make such a basic investment at

⁴ See Letter to the Editor, “Xcel's proposals will benefit city,” published in the Red Wing Republican Eagle on November 7, 2009.

⁵ For example, environmental and radiological monitoring of seven nuclear power plant sites conducted by the Illinois Emergency Management Agency includes continuous sampling of each nuclear plant's gaseous effluent, over 1000 key data parameters every minute from each operating reactor (including radiation levels, meteorological data, reactor power levels, pressures and temperatures), and a network of gamma radiation detectors. See

the plant. The people of our Tribe and the citizens of Minnesota and Wisconsin in the vicinity of the plant deserve better.

Community members, especially the children, have also expressed their fears and anxieties about their health and safety, and the health and safety of future generations. The operation of the plant, tritium leaks, radiological emissions, reports of safety violations, the high-voltage power lines running alongside our reservation, and the storage of spent nuclear fuel in such close proximity to our homes has caused and will continue to cause anxiety, fear, stress and other mental health damages to the Tribe's current members and future generations.

“Effects on human health can be linked to ecosystem degradation or ecosystem change.”⁶ With recent advances in biogenetic technology that use genetic testing to monitor the genetic impacts of low dose radiation exposure come new concerns about causes of radiogenic diseases and transgenerational health impacts. These concerns overlap with the traditional Dakota philosophy of *Seven Generations* – the belief that the actions taken by and affecting our 800-member Community today must also be considered in light of how they will influence and impact the next seven generations of Prairie Island Mdewakanton Dakota. The scientific advances in genetic medicine are revealing the short- and long-term effects of low dose radiation exposure on nuclear industry workers and residents living in close proximity to nuclear power plants. Considering that the Community's long-term exposure will likely span 100 years or more (depending on when or if the spent nuclear fuel is ever removed from Prairie Island), the likelihood of cancers and other diseases caused by long-term exposure to low doses of radiation is a very real and significant concern for the Community.

http://iema.illinois.gov/radiation/pdf/BNFS_RMSBrochure.pdf. A similar comprehensive, real-time, computer network-linked monitoring system that uses the best, most sensitive monitoring equipment available today should be required for the continued operation of the PINGP.

⁶ Emily Monosson and Richard T. Di Giulio, “Ecosystem degradation: links to human health,” Interconnections Between Human Ecosystem Health, (Chapman & Hall 1996) at 261.

The Community bears a disproportionate risk as a result of the operation of the PINGP and the ongoing (and quasi-permanent) storage of spent nuclear fuel just over 600 yards away from Community residences. Due to its close proximity immediately adjacent to the PINGP, the Community has suffered and continues to suffer significant cumulative and integrated environmental health and safety impacts as a result of plant operations and the ever-expanding Independent Spent Fuel Storage Installation (ISFSI). Certain impacts have already been addressed in these proceedings. *See* Board's 12/5/08 Order.

The Community has incurred significant financial burdens due to the operation of the PINGP, and what for all practical purposes is the permanent, long-term storage of spent nuclear fuel on Prairie Island. And the Community will continue to incur significant costs to ensure the safe operation of the PINGP and the ongoing protection of the environmental health and safety of the Community, its members, and its lands. The Community now has a 10-member Police Department, whose officers are State-Licensed Peace Officers. Accordingly, for Emergency Management and Emergency Preparedness purposes, the Tribe must also be considered as a first responder to any incident at the PINGP.

As noted in its original petition to intervene, the Community is concerned that the renewal of the PINGP license may have a detrimental effect on the health and safety of Community members, and pose a risk to visitors to the reservation. In addition, the renewal of the license may have a detrimental effect of the environment in which the Community is situated. If the renewal is ultimately granted, the Community wants to ensure that the applicant operates the PINGP in the safest manner possible, with all potential environmental impacts identified, evaluated, and mitigated through license conditions on the Applicant

On December 5, 2008, the Atomic Safety and Licensing Board granted the Community's hearing request, and admitted seven of the Community's contentions challenging the application of NSPM.⁷ Since then, the applicant and the Community have resolved six of those contentions.

III. ARGUMENT

A. Standards for New or Amended Contentions

The standards for new or amended contentions on environmental issues is set forth in 10 CFR 2.309(f)(2) of NRC regulations. Section 2.309(f)(2) provides that contentions may be amended or new contentions filed if there are data or conclusions in the NRC draft or final EIS that differ significantly from the data or conclusions in the applicant's environmental report. This standard will be discussed in regard to each of the Community's contentions. These contentions are submitted in a timely manner consistent with the Licensing Board's Order of November 4, 2009.⁸

B. New Contentions

1. THE DRAFT SEIS DISCUSSES NUMEROUS METHODS OF MITIGATING THE IMPACTS IDENTIFIED IN THE DRAFT. HOWEVER, THE NRC DOES NOT REQUIRE THE APPLICANT TO ADOPT ANY OF THESE MITIGATING ACTIVITIES. CONSISTENT WITH THE NRC POLICIES ON ENVIRONMENTAL JUSTICE, UNDERSCORED BY THE NRC'S TRUST RESPONSIBILITIES IN REGARD TO NATIVE AMERICAN TRIBES, THE NRC SHOULD REQUIRE THE APPLICANT TO IMPLEMENT THESE MITIGATING TECHNIQUES.

The draft SEIS identifies numerous methods for mitigating the impacts discussed in the document.⁹ However, the NRC does not require the Applicant to adopt any of these mitigation

⁷ Northern States Power Co. (Prairie island Nuclear Generating Plant, Units 1 and 2), LBP-08-26, 68 NRC 905 (2008).

⁸ *Id.* at 3.

⁹ *See, e.g.*, SEIS at pages 3-3; 3-4; 3-5; 3-6; 3-8; Section 3.2.9; 4-11; 4-13; 4-17; 4-23; 4-24; 4-32; 4-35; and 4-52.

strategies. The only mitigation required of the Applicant is that imposed as part of the settlement of the Community's Contention 1 on cultural resources.¹⁰ The Applicant did not provide any analysis of, or mitigation of, the environmental impacts related to environmental justice in its Environmental Report.¹¹ Therefore, the Community meets the standard for the admission of new contention in 10 CFR 2.309(f)(2) because it is based on data or conclusions in the draft or final EIS that differ significantly from the data or conclusions in the Applicant's environmental report.

To fulfill its responsibilities under the National Environmental Policy Act ("NEPA"),¹² and to affirm its general commitment to the implementation of the Executive Order on environmental justice,¹³ the Commission has adopted a Policy Statement on environmental justice ("Policy Statement").¹⁴ The Commission's Policy Statement recognizes that the impacts, for purposes of NEPA, of its regulatory or licensing actions on certain populations may be different from the impacts on the general population. Disproportionately high and high adverse impacts of a proposed action on low-income or minority communities call for "close scrutiny – a hard look – under NEPA."¹⁵ "Disparate" impact analysis is the principal tool for advancing environmental justice under NEPA.¹⁶ The NRC's goal is to identify and adequately weigh or mitigate effects on low-income or minority communities that become apparent only by considering factors peculiar to those communities.¹⁷

¹⁰ *Id.* at 4-32, line 32.

¹¹ Prairie Island Nuclear Generating Plant License Renewal Application, Appendix E.

¹² 42 U.S.C. Section 4321 *et. seq.*

¹³ Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 59 Fed. Reg. 7629 (February 16, 1994).

¹⁴ Policy Statement on the Treatment of Environmental Justice Matters in Regulatory and Licensing Actions, U.S. Nuclear Regulatory Commission, 69 Fed.Reg. 52040 (August 24, 2004) (NRC Policy Statement).

¹⁵ *Id.* at 52040.

¹⁶ Private Fuel Storage, L.L.C. (Independent Fuel Storage Installation), LBP-02-8, 55 NRC 171, 190 (2002).

¹⁷ Louisiana Energy Services (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 100 (1998).

The Commission, in characterizing the legal nature of the Policy Statement, noted “...it does not de-emphasize the importance of adequately weighing or **mitigating** the affects of a proposed action on low income and minority communities by assessing impacts peculiar to those communities.”¹⁸ Furthermore, in the licensing context, the NRC’s focus is on full disclosure, as required by NEPA, of environmental impacts associated with a proposed action “...**and** [t]o take care to **mitigate** or avoid special impacts attributable to the special character of the community.”¹⁹ For example, this responsibility to mitigate was characterized by the NRC in an Environmental Impact Statement on a new reactor licensing action as follows:

In its environmental reviews, the NRC considers demographic and economic circumstances of local communities where nuclear facilities are to be sited and **takes care to ensure that the license applicant mitigates** or avoids special impacts attributable to the special character of those communities.²⁰

The draft SEIS specifically identifies the Community as a “minority population” for purposes of the NRC’s environmental justice responsibilities.²¹ The Community believes that this responsibility to ensure that the Applicant mitigates all impacts within the range of the Applicant’s authority applies to the broad range of mitigating strategies identified in the draft SEIS. These mitigating strategies are identified in Exhibit A to this pleading. As the NRC noted, “[b]ecause of its proximity to the plant and the uniqueness of the community, NRC acknowledges that there may be the potential for disproportionate impacts to PIIC.”²²

¹⁸ NRC Policy Statement at 52042 (emphasis added).

¹⁹ *Id.* at 52044, citing as authority, Private Fuel Storage L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-20, 56 NRC 147, at 156 (2002) (emphasis added).

²⁰ Final Environmental Impact Statement for an Early Site Permit (ESP) at the North Anna ESP Site, U.S. Nuclear Regulatory Commission, NUREG-1811, Vol. 2, at 225 (December 2006) (emphasis added).

²¹ *Id.* at 4-34.

²² SEIS at 4-35.

Unfortunately, the NRC only identified one disproportionate impact of any significance, the MODERATE finding of impacts on historic and archaeological resources.²³ As the Community noted earlier, the only reason why the applicant has committed to the mitigation of those impacts is because it was the *quid pro quo* for the settlement of the Community's original Contention 1. The Community believes that the NRC should require the Applicant to implement all of the mitigation strategies described in the draft SEIS, as identified in Exhibit A to this pleading. This is not only for the reasons that the NRC acknowledged, i.e., close proximity of the Community to the plant and the uniqueness of the Community, but also because of the cumulative impacts the Community, a Cooperating Agency (for developing certain aspects of the draft SEIS, including Environmental Justice), identified in the draft SEIS.²⁴ The NRC has identified the impacts and the mitigating strategies. The mitigating strategies are within the power of the Applicant to implement. All of the impacts, regardless of their ranking by the NRC, are significant and unacceptable to the Community. There is no assurance that any of the mitigation strategies will be implemented without some regulatory action by the NRC.

There is also one disproportionate impact specifically identified by the NRC that the Community believe is mischaracterized. In its analysis of the impacts on "Public Services – Transportation,"²⁵ the NRC identifies the impacts as ranging from SMALL to MODERATE. These impacts would result from the traffic associated with the additional workers needed for the refurbishment activities of replacing the steam generators.²⁶ MODERATE impacts are those where the environmental effect are "sufficient to alter noticeably, but not to destabilize important

²³ *Id.* at 4-35.

²⁴ *Id.* at 4-52.

²⁵ *Id.* at 3-7.

²⁶ *Id.* at 3-2 to 3-3.

attributes of the resource.”²⁷ The NRC also identifies several mitigating strategies to alleviate the impact of refurbishment.²⁸

In Section 3.2.10 of the draft SEIS, the NRC notes that these SMALL to MODERATE refurbishment impacts could disproportionately affect the Community and that the Community could also experience the increased noise level from steam generator replacement activities.²⁹ The NRC concludes that these impacts are of “short duration and are not expected to be high.”³⁰ The Community does not believe that just because an impact has a short duration, that its impact will not be “high and adverse.” According to the draft SEIS, Federal agencies are responsible for identifying and addressing potential disproportionately high and adverse human health and environmental impacts on low-income and majority communities.³¹ “Disproportionately high and adverse environmental effects” are those that appreciably exceed the environmental impact on the larger community.³²

The Community disagrees with the NRC conclusion that there “exists no disproportionately high and adverse impacts to the PIIC.”³³ The Community believes that the potential for a MODERATE impact due to the refurbishment activities discussed above, qualifies as a disproportionate high and adverse impact under the NRC criteria as it “appreciably exceeds the environmental impact on the larger community.”³⁴ It is not only the members of the

²⁷ *Id.* at 1-4.

²⁸ *Id.* at 3-8.

²⁹ *Id.* at 3-9.

³⁰ *Id.*

³¹ *Id.* at 4-33.

³² *Id.* This definition is drawn from Council on Environmental Quality (CEQ) guidance, “Environmental Justice: Guidance Under the National Environmental Policy Act (NEPA)”, Council on Environmental Quality (1997).

³³ *Id.* at 4-39. Note that the NRC would have classified the MODERATE impact on cultural and archeological resources as disproportionately high and adverse but did not do so because of the Applicant’s commitment to mitigation strategies. What the Community desires in regard to the potentially MODERATE impact from refurbishment is the same type of commitment of the applicant to mitigation.

³⁴ See “Procedural Guidance for Preparing Environmental Assessments and Considering Environmental Issues”, Appendix D, NRR Office Instruction, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, LIC-203, Revision 1 (2004), the instructions to NRC staff for evaluating potential environmental justice impacts.

Community that will be affected by the applicant's refurbishment activities, but also to the visitors to the Community's resort. Not only are safety considerations involved, but also significant economic resources. The fact that the impact is of short duration does not mean that it isn't significant and unacceptable. The NRC should require the applicant to adopt the mitigation strategies identified in the draft SEIS, at a minimum.

The responsibility of the NRC to ensure the mitigation of potential environmental impacts to the Community is further underscored by the NRC's trust responsibility, as a federal agency, to a Native American Tribe, such as the Community. Although the NRC does not have a formal, overarching Native American policy, the Commission has committed to following the principles of the trust responsibility as espoused by various Executive Orders and memoranda: "The staff should continue to implement the spirit and letter of the President's 1994 guidance to ensure that the rights of sovereign tribal governments are fully respected and to operate within a government-to-government relationship with Federally-recognized Native American Tribes."³⁵

2. The Environmental Report submitted by Northern States Power Company and Supplement 39 to Generic Environmental Impact Statement for License Renewal for Nuclear Plants, Regarding Prairie Island Nuclear Generating Plant Units 1 and 2 issued by the NRC Staff on November 13, 2009 fail to satisfy the requirements of NEPA, 42 U.S.C. § 4332 *et seq.*, and NRC regulations implementing NEPA, because the ER and DSEIS do not adequately address the adequacy of the monitoring for tritium in the groundwater.

The Community does not believe that the potential tritium releases to the environment, specifically in groundwater, at Prairie Island have been adequately evaluated. The SEIS merely asserts that, because detected levels are below the EPA safe drinking water standard, human

See also Environmental Standard Review Plan, Section 5.8.3 "Environmental Justice Impacts", U.S. Nuclear Regulatory Commission, NUREG-1555, Rev. 1 (July 2007).

³⁵ Memorandum for James M. Taylor, Executive Director for Operations from William M. Hill, Acting Secretary, U.S. Nuclear Regulatory Commission, at 2 (November 13, 1996).

health is protected.³⁶ This rationale ignores the root cause of the problem: the leaks from plant operations that have not been properly evaluated and/or corrected.

The Community submitted scoping comments regarding our concerns about the potential tritium contamination of the groundwater around the Prairie Island site, particularly for the sources of drinking water for the members of our Tribe. These concerns were raised again in our comments on the draft EIS. Since then, the NRC has published a proposed revision to the Generic Environmental Impact Statement (GEIS) that acknowledges the site specific nature of effluent impacts on the environment.³⁷ The proposed GEIS revision proposes to change tritium contamination to a Category 2 issue.³⁸

Despite the tritium contamination concerns, as documented in the Community's EIS scoping comments, the oral and written comments from others during the scoping process, our Cooperating Agency submissions, our Environmental Justice issue, the SEIS does not adequately address groundwater contamination as a Category 2 issue. The SEIS analysis for Environmental Justice states that there was no tritium detected in Red Wing's drinking water, therefore well data (from the 2007 REMP report) showed no radiological effects from plant operation.³⁹ It is important to note that the REMP monitoring sites do not include sites P-10, MW-7 and MW-8 (within PINGP site); these sites are included in the PINGP Special Well and Surface Water Samples (i.e., tritium monitoring program). According to the 2007 and 2008 reports, "the elevated tritium levels in sample wells P-10, MW-7, and MW-8 in 2007 may be due to prior leakage from the PINGP liquid radwaste discharge pipe or discharge of turbine building sump

³⁶ SEIS at 4-20.

³⁷ NUREG-1437, Revision 1, at S-10.

³⁸ *Id.*

³⁹ SEIS at 4-40.

water into the landlocked area.”⁴⁰ In 2007, tritium levels for well P-10 had fluctuating levels of tritium from a low of 390 pCi/L to a high of 2258 pCi/L. In 2008, levels for well P-10 fluctuated from 58 pCi/L to 2060 pCi/L. Accordingly, it is not correct to state that there is no radiological effect on groundwater from plant operation. NSP’s own data clearly show that there is an effect.

As a result of tritium contamination at several nuclear power plants, as described in Information Notice 2006-13, “Ground-Water Contamination Due To Undetected Leakage Of Radioactive Water,” dated July 10, 2006, the nuclear industry has developed new guidance to ensure that the radiological environmental monitoring program (REMP) adequately monitors, evaluates and reports potential groundwater contamination.⁴¹

According to the draft GEIS revision, tritium is the most mobile radionuclide in groundwater and “the location and construction of monitoring wells, relative to potential leak locations have not been evaluated.”⁴² Further, the GEIS states, “it is possible that a different well placement could detect higher or lower activity present.”⁴³

There are three groundwater sample sites (individual homes) on the Tribe’s land, but these are a little more than a mile from the plant site (especially P-10). Additional sites closer to the Community’s boundary should be identified, and additional monitoring wells installed and sampled much more regularly than once a year. In addition, the Community’s drinking water should be monitored with the same frequency as Red Wing’s municipal water supply, with additional monitoring of private wells in sufficient frequency to assure the resident Community Members that their drinking water is not contaminated with tritium.

⁴⁰ 2007 and 2008 Special Tritium Report at E-5.

⁴¹ Nuclear Energy Institute, “Industry Ground Water Protection Initiative – Final Guidance Document,” NEI-07-07, August 2007 at 2.

⁴² NUREG-1437, Revision 1, page 4-46 and 4-47.

⁴³ *Id.* at 4-47.

According to the draft SEIS for the PINGP, NSP “indicated that the elevated tritium levels in the three onsite monitoring wells might be due to prior leakage from the PINGP 1 and 2 liquid radwaste discharge pipe, which was replaced in 1992, or as a result of the turbine building sump water discharge into a landlocked area” (NMC 2008c) (emphasis added). NSP simply cannot yet explain the source of tritium, much less the wild fluctuations that persist year after year. Additional monitoring is needed to find an answer once and for all.

Since NSP samples and analyzes monthly groundwater samples for tritium, these results should be shared with the Community on a real-time basis. To the extent there is naturally occurring radon and other naturally occurring or non-naturally occurring radionuclides in the Tribe’s water supply, then it would be appropriate to mitigate that exposure in lieu of the Tribe’s unique exposure to tritium due to its close proximity with the plant.

Even though the REMP report states that the tritium results are far below the EPA drinking water standard of 20,000 pCi/L, new and significant studies and analysis (discussed more fully below) raise significant concerns about the safety of even low dose exposure, raising the question of what NSP and the NRC are doing to “continuously evaluat[e] the latest radiation protection recommendations from international and scientific bodies to ensure the adequacy of the standards the agency uses,” in accordance with the US NRC Fact Sheet of July 2006.

It is still not clear whether and to what extent NSP and the NRC have modified or improved their respective programs and procedures to inspect and assess the equipment and structures at PINGP that have the potential to leak tritium in response to the US NRC Fact Sheet of July 2006. Whether and to what extent NSP and the NRC have modified or improved their ability to evaluate NSP’s abilities to analyze for additional discharge pathways, such as groundwater, as a result of a spill or leak in response to the US NRC Fact Sheet of July 2006.

In summarizing the new Category 2 issue, the draft GEIS states "On the basis of occurrence at several nuclear plants, the impact of radionuclide releases to groundwater quality could be small or moderate, depending on the occurrence and frequency of leaks and the ability to respond to leaks in a timely fashion."⁴⁴ As a result, the nuclear industry has developed improved methods for locating, monitoring and evaluating groundwater as described in:

- Electric Power Research Institute, "Groundwater Protection Guidelines for Nuclear Power Plants (Public Edition)," TR-1016099, Final Report, January 2008
- Advanced Environmental Solutions, LLC "Integrated Ground-Water Monitoring Strategy for NRC-Licensed Facilities and Sites: Logic, Strategic Approach and Discussion," NUREG/CR-6948, November 2007
- Nuclear Energy Institute, "Industry Ground Water Protection Initiative – Final Guidance Document," NEI-07-07, August 2007
- Draft Regulatory Guide, "Measuring, Evaluating, and Reporting Radioactive Material In Liquid and Gaseous Effluents and Solid Waste," DG-1186, October 2008

Tritium has been found in the Tribe's drinking water. In the late-1980 early-1990 time frame, above-normal background levels of tritium were detected in wells around Prairie Island. Although the detected levels of tritium were below the EPA standard of 20,000 pico curies per liter (pCi/L), the range detected (1,300 – 1,500pCi/L) was above what detected in other wells (300 – 400 pCi/L). At that time, all community members were using individual wells. In response, in 1992 the Community developed its current central water system, which utilizes a deep well (over 500 feet).

Tritium is still detected in observation wells and, despite the broad generalization in the SEIS for Prairie Island, Community members are still concerned about the health impacts. Consequently, the REMP for Prairie Island should be specifically evaluated against the current groundwater protection standards, as follows:

⁴⁴ NUREG-1437, Revision 1, page 4-47.

- a. Implement, in full, each and every objective and criterion set forth in the Nuclear Energy Institute's Groundwater Protection Initiative, NEI-07-07.
 - b. Provide detailed written reports to the Community and the City of Red Wing, as well as MDH every three months, which will include well monitoring information in and around the plant, as well as summarize material information discovered as it implements and maintains each discrete subpart of the groundwater protection initiative.
 - c. Discontinue permanently the discharge of any liquid waste into the landlocked area.
 - d. Conduct a comprehensive surface investigation in and around wells P-10, MW-7 and MW-8, as well as consideration of the installation of other monitoring wells in and around the area of wells MW-7 and MW-8.
 - e. Identify the source and quantity of all liquid and gaseous tritium emissions, including a comprehensive explanation for the fluctuating amounts of tritium released and detected in PINGP's monitoring wells.
3. The Environmental Report submitted by Northern States Power Company and Supplement 39 to Generic Environmental Impact Statement for License Renewal for Nuclear Plants, Regarding Prairie Island Nuclear Generating Plant Units 1 and 2 issued by the NRC Staff on November 13, 2009 fail to satisfy the requirements of NEPA, 42 U.S.C. § 4332 *et seq.*, and NRC regulations implementing NEPA, because the ER and DSEIS do not adequately estimate dose exposures for all individuals who live within 3 kilometers of all sources of emissions in the facility.

According to Subpart H of 40 C.F.R., dose estimates must be calculated from all cumulative doses for individuals residing within 3 kilometers. The SEIS is deficient because it does not provide dose estimates from NRC within 3km radius for air, water & indigenous foodstuffs pathways as required by NEPA. The Community members who reside within 3 kilometers of the PINGP will be exposed to doses from multiple sources, with higher doses under certain meteorological conditions (southerly winds; temperature inversions; mists; fogs; and light rains). It does not appear that these worse case scenarios have been fully examined. Accordingly, the potential adverse impact on individual Community members has not been fully examined in the ER or SEIS. This analysis is critical for a complete and thorough environmental justice analysis.

IV. CONCLUSION

For the foregoing reasons, the Community's new contentions based on the NRC's draft Supplemental Environmental Impact Statement should be admitted in their entirety.

Respectfully Submitted,
/Signed electronically by Philip R. Mahowald/

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Dated: December 14, 2009

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	Docket Nos. 50-282-LR
Northern States Power Co.)	50-306-LR
)	
(Prairie Island Nuclear Generating Plant,)	ASLBP No. 08-871-01-LR
Units 1 and 2))	

CERTIFICATE OF SERVICE

I hereby certify that copies of “Prairie Island Indian Community’s Motion for Leave to File New Contentions on the NRC’s Draft Supplemental Environmental Impact Statement,” dated December 14, 2009, was provided to the Electronic Information Exchange for service on the individuals listed below, this 14th day of December, 2009.

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